



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

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Cons. # 22420-2006-F-0098

S.E. "Lou" Woltering, Forest Supervisor
Lincoln National Forest
Federal Building
1101 New York Avenue
Alamogordo, New Mexico 88310-6992

Dear Mr. Woltering:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the proposed Cox Power Line Realignment Project located Sacramento Ranger District, Lincoln National Forest, Otero County, New Mexico. The biological assessment (BA) evaluated effects from the proposed action on the Mexican spotted owl (owl) (*Strix occidentalis lucida*). You determined that the proposed action "may affect, is likely to adversely affect" the owl and requested formal consultation in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The proposed project is not within an area designated as critical habitat; therefore, no critical habitat will be affected. Your April 11, 2006, request for formal consultation was received on April 14, 2006.

BIOLOGICAL OPINION

CONSULTATION HISTORY

Formal consultation began on April 14, 2006, when the Service received a biological assessment and evaluation (BA&E) on the proposed action. On May 30, 2006, we acknowledged the request for formal consultation.

This biological opinion (BO) is based on information provided in the April 11, 2006, biological assessment, emails, and telephone conversations with Lincoln National Forest personnel and other sources of information. A complete administrative record of this consultation is on file at the New Mexico Ecological Services Field Office.

DESCRIPTION OF PROPOSED ACTION

The proposed action is to fell and remove 117 live trees and 5 snags, remove an existing electric transmission line, realign portions of the exiting transmission line, and install new

poles (southern portion of the Pierce owl protected activity center [PAC]). Approximately 7.6 acres of forest habitat would be affected, of which 2.1 acres are within the Pierce PAC.

The trees to be felled would include 99 trees greater than 9 inches in diameter at breast height (dbh) and considered commercial sized timber. Within the PAC, there are 14 trees greater than 9 inches dbh marked for removal. Adjacent to the PAC, in 3.1 acres of restricted habitat 61 trees greater than 9 inches dbh are marked for removal. Tree felling would use chainsaws. Timber removal techniques have not been identified; however, the worst case scenario is that a metal-tracked skidder/dozer and log truck would be used.

The transmission corridor would be moved from the east side of New Mexico Highway 130 to the west side of the highway. The length of the realignment would be approximately 1,500 feet and the width of the realignment would be 250 feet at its widest point. Within the southern portion of the PAC, new power poles would be installed.

A bucket truck would be used to remove the old transmission lines and install four 1/0 aluminum conductors steel reinforced transmission lines within the PAC and adjacent restricted habitat. The activities would not occur during the owl's breeding season (March 1 to August 31).

Action Area

The action area is defined as the Pierce owl PAC and the adjacent 0.25 miles of owl restricted habitat.

Conservation Measures

Any work within the PAC, including maintenance activities, would not occur during the owl's breeding season (March 1 to August 31) unless the district biologist conducts surveys and finds that the owls are either absent from the PAC or are not nesting.

STATUS OF THE SPECIES AND CRITICAL HABITAT

Species/Critical Habitat Description

The owl was listed as threatened on March 16, 1993 (U.S. Fish and Wildlife Service 1993). Critical habitat was designated on August 30, 2004 (U.S. Fish and Wildlife Service 2004).

The American Ornithologist's Union recognizes three spotted owl subspecies: California spotted owl (*S. o. occidentalis*), Mexican spotted owl (*S. o. lucida*), and northern spotted owl (*S. o. caurina*). The Mexican spotted owl is distinguished from the California and northern subspecies by plumage, genetic makeup, and geographic distribution. This owl is mottled in appearance with irregular white and brown spots on its abdomen, back and head. Its white spots are larger and more numerous than in other subspecies giving it a

lighter appearance. Several thin white bands mark its brown tail. Unlike most other owls, all spotted owls have dark eyes.

There are approximately 8.6 million acres (3.5 million hectares) of critical habitat designated in Arizona, Colorado, New Mexico, and Utah on Federal lands. Critical habitat is limited to areas that meet the definition of protected and restricted habitat as described in the Recovery Plan for the Mexican Spotted Owl (Recovery Plan) (U.S. Fish and Wildlife Service 1995). Protected habitat is defined as occupied mixed-conifer or pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the past 20 years. Restricted habitat includes mixed-conifer forest, pine-oak forest, and riparian areas outside of protected areas.

In Forest Service Region 3, 173 formal consultations have been completed or are in draft. These formal consultations identify anticipated take of owls in 365 PACs. This number includes 45 PACs within the Basin and Range-East RU (U.S. Fish and Wildlife Service 2006). Consultations have dealt with actions proposed by the Forest Service, Bureau of Indian Affairs, Department of Energy, Department of Defense, and Federal Highway Administration. These proposals include timber sales, road construction, fire/ecosystem management projects (including prescribed natural, wildland use, and management-ignited fires), livestock grazing, recreation activities, utility corridors, military overflights, construction activities, and wildlife research.

Distribution and Abundance

The owl has the largest geographic range of the three subspecies. Its range extends from Aguascalientes, Mexico, through the mountains of Arizona, New Mexico, and western Texas, the canyons of southern Utah, and the Front Range of central Colorado. The owl's distribution is fragmented throughout its range, corresponding to forested mountains and rocky canyon lands (U.S. Fish and Wildlife Service 1995, Tarango et al. 1997, Young et al. 1997, Sureda and Morrison 1998, Gutierrez et al. 1995, Peery et al. 1999, Sorrentino and Ward 2003). In the United States, 91 percent of the owls known to exist between 1990 and 1993 occur on lands administered by the Forest Service. Eighty-nine percent of the owls known to exist between 1990 and 1993 in Mexico were in the States of Sonora and Chihuahua.

The current owl distribution mimics its historical extent, with a few exceptions. The owl has not been reported recently along major riparian corridors in Arizona and New Mexico, nor in historically documented areas of southern Mexico. Riparian communities and previously occupied localities in the southwestern United States and southern Mexico have undergone significant habitat alteration since the historical sightings (U.S. Fish and Wildlife Service 1995). Areas likely to be important population centers include the sky islands of southeastern Arizona and the Sacramento Mountains of central New Mexico (U.S. Fish and Wildlife Service 1995). Although information on owl numbers permits a view of the current distribution, it is not complete enough to provide a reliable estimate of total population size. Owls occur at higher densities in mixed-conifer forests than in pine-oak, pine, and piñon-juniper forest types (Skaggs and Raitt 1988).

Historic population size estimates and range of the owl are not known, however, present population size and distribution are thought to be similar (U.S. Fish and Wildlife Service 1995). In 2002, the Forest Service reported 987 PACs in Arizona and New Mexico (U.S. Department of Agriculture Forest Service, Southwestern Region 2003). Current information suggests there are 15 PACs in Colorado, 105 PACs in Utah, and 43 PACs on National Park Service lands in Arizona, therefore, 1,176 PACs have been identified. Based on this number of owl sites, we believe that the total known owl numbers on Federal lands in southwestern United States range from 1,176 or 2,352, depending on whether one bird or a pair occupies the PACs. Additional surveys are likely to document more owls on Forest Service and other lands. For example, Geo-Marine (2004) reported an additional 26 activity centers not previously designated by the Gila National Forest.

In summary, the owl is distributed discontinuously throughout its range, with its distribution largely restricted to montane forests and canyons. Although future efforts will undoubtedly discover additional owls, their documented spatial distribution in the United States is not likely to change greatly.

Habitat

Owls nest, roost, forage, and disperse in diverse biotic communities. Mixed-conifer forests are commonly used throughout most of the range (Skaggs and Raitt 1988, Ganey 1988, Ganey and Balda 1989, Willey 1993, Fletcher and Hollis 1994). In general, these forests are dominated by Douglas-fir and/or white fir, with co-dominant species including southwestern white pine, limber pine, and ponderosa pine. The understory often contains the above coniferous species as well as broadleaved species such as Gambel oak, maples, box elder, and New Mexico locust. In the northern portion of its range, including southern Utah, southern Colorado, and far northern Arizona and New Mexico, owls occur primarily in steep-walled, rocky canyons (Kertell 1977, Reynolds 1990, Willey 1993).

Owls are highly selective for roosting and nesting habitat, but forage in a wider array of habitats (U.S. Fish and Wildlife Service 1995, Ganey and Balda 1994, Seamans and Gutierrez 1995). Roosting and nesting habitat exhibit certain identifiable features, including large trees with trunk diameters greater than 12 inches, high tree basal area, uneven-aged tree stands, multi-storied canopy, moderate to high canopy closure, and decadence in the form of downed logs and snags (Ganey and Balda 1989, Grubb et al. 1997, Tarango et al. 1997, Peery et al. 1999, Ganey et al. 2000, Geo-Marine 2004). Canopy closure is typically greater than 40 percent (Ganey and Balda 1989, Zwank et al. 1994, Grubb et al. 1997, Tarango et al. 1997, Ganey et al. 1998, Young et al. 1997, Ganey et al. 2000, Geo-Marine 2004). These types of areas provide vertical structure and high plant species richness that are important to owls (Seamans and Gutierrez 1995, Ganey et al. 2003). Tarango et al. (1997) and Ganey et al. (2000) recorded seven or more tree species at roost sites. Therefore, mixed-conifer dominated by Douglas-fir, pine-oak, and riparian forests with high tree diversity are important to the owl.

In general, owls forage more than or as expected in unlogged forests, and less than or as expected in selectively logged forests (Ganey and Balda 1994). Both high-use roosting and high-use foraging sites had more big logs, higher canopy closure, and greater

densities and basal areas of both trees and snags than random sites (Ganey and Balda 1994). Owls clearly used a wider variety of forest conditions for foraging than they used for roosting (Ganey and Balda 1994).

The owls have been described as a “perch and pounce” predators. They typically locate prey from an elevated perch by sight or sound, then pounce on the prey and capture it with their talons. Spotted owls have also been observed capturing flying prey such as birds and insects (Verner et al. 1992). They hunt primarily at night (Forsman et al. 1984, Ganey 1988), although infrequent diurnal foraging has been documented (Forsman et al. 1984).

Owls consume a variety of prey throughout their range but commonly eat small- and medium-sized rodents such as woodrats (*Neotoma* spp.), peromyscid mice (*Peromyscus* spp.), and microtine voles (*Microtus* spp.) (U.S. Fish and Wildlife Service 1995, Young et al. 1997, Delaney et al. 1999, Seamans and Gutierrez 1999). Mexican woodrats (*N. mexicana*) are typically found in areas with considerable shrub or understory tree cover and high log volumes, or rocky outcrops associated with piñon-juniper woodlands (Sureda and Morrison 1998, Ward 2001). Sureda and Morrison (1998) and Ward (2001) found deer mice (*P. maniculatus*) to be more abundant and widespread in the 60 to 100 year old stands of mixed-conifer forests. Mexican voles (*M. mexicanus*) are associated with mountain meadows and high herbaceous cover, primarily grasses whereas, long-tailed voles (*M. longicaudus*) are found in dry forest habitats with dense herbaceous cover, primarily forbs, many shrubs, and limited tree cover (Ward 2001). Regional differences in the owl's diet likely reflect geographic variation in population densities and habitats of both prey and the owl.

High levels of owl reproductive success and production may be due to prey abundance (Delaney et al. 1999). U.S. Fish and Wildlife Service (1995) documented an increase in owl production when moderate to high levels of woodrats, peromyscid mice, and voles, were consumed. A diverse prey base is dependant on availability and quality of diverse habitats. Owl prey species need adequate levels of residual plant cover, understory cover, and high log volume. Therefore, a wide variety of forest and vegetative conditions are important to the owl and its prey.

Life History

Generally, owls are long-lived. Juvenile survival is low (0.143 percent), and adult survival is high (0.94 percent) (Gutierrez et al. 1995). No sexual differences are known in survival schedules (Gutierrez et al. 1995).

Occasionally the owl breeds in its first year (Gutierrez et al. 1995). Majority of the pairs do not breed every year; some are known not to breed over a period of 5-6 years (Gutierrez et al. 1995). Subadults nested less frequently (10 percent) and fledged young less frequently (7 percent) than adults (58 percent) (Gutierrez et al. 1995). Of the 144 nesting females, 85 percent were adults, whereas 3 percent and 12 percent were first- and second-year subadults (Gutierrez et al. 1995).

Calling activity increases from March through May (although nesting females are largely silent during April and early May), and then declines from June through November (Gutierrez et al. 1995). Owls are usually silent from December through February (Gutierrez et al. 1995). Courtship begins in March with pairs roosting together during the day and calling to each other at dusk (Ganey 1988). Eggs are laid in late March or early April (Delaney et al. 1999). The incubation is approximately 30 days and performed entirely by the female (Ganey 1988, Forsman et al. 1984). Foraging is entirely by males during incubation and the first half of the brooding period, females leave the nest only to defecate, regurgitate pellets, or receive prey from their mate (Forsman et al. 1984, Ganey 1988).

Juvenile owls disperse from their natal territories in September and October into a variety of habitats ranging from high-elevation forests to piñon-juniper woodlands and riparian areas surrounded by desert grasslands (Gutierrez et al. 1995, Arsenault et al. 1997, Willey and c. Van Riper 2000). Observations of long-distance juvenile dispersal provide evidence that they use widely spaced islands of suitable habitat that are connected at lower elevations by piñon-juniper and riparian forests. Owls have been observed moving across open low desert landscapes between islands of suitable breeding habitat (Arsenault et al. 1997, Ganey et al. 1998, Willey 1993). Owl movements were also observed between sky island mountain ranges in New Mexico (Gutierrez et al. 1995). These movement patterns contribute to isolated populations and may have genetic significance to the owl's conservation (Seamans et al. 1999, Willey and c. Van Riper 2000). Therefore, contiguous stands or islands of suitable mixed-conifer, pine-oak, and riparian forests are important to the owl.

Population Dynamics

Seamans et al. (1999) reported evidence of 10 percent or greater population declines in central Arizona and west-central New Mexico. Both populations experienced lower survival rates in the late 1990's. Gutierrez et al. (2003) concluded that with four additional years of data on these same populations, the decline observed by Seamans et al. (1999) on the Arizona study area was temporary, whereas the decline in New Mexico appeared to be continuing. Wide population fluctuations may be common for populations of owls (Gutierrez et al. 2003).

The Upper Gila Mountain Recovery Unit (RU) has the largest known percent of owl PACs (63 percent), followed by the Basin and Range-West, (16 percent), Basin and Range-East (14 percent), Southern Rocky Mountain-New Mexico (5 percent), and Colorado Plateau (2 percent) (U.S. Department of Agriculture Forest Service, Southwestern Region 2003). Reports of PAC occupancy range from 68 to 79 percent in the Lincoln and Gila National Forests, respectively (Geo-Marine, Inc. 2003, Sorrentino and Ward 2003, Ward et al. 2003).

The Lincoln National Forest is within the Basin and Range-East RU and contains the third largest number (138) of owl PACs in the United States (U.S. Department of Agriculture Forest Service, Southwestern Region 2003). Because of the high concentration of owls, this RU is an important source population for other areas (U.S.

Fish and Wildlife Service 1995). Owls here occur in isolated mountain ranges scattered across the region, the largest portion occurring in the Sacramento Mountains. In this RU, owls were reported on Forest Service lands in the Sandia, Manzano, Sacramento, and Guadalupe Mountains, and in Guadalupe National Park, Carlsbad Caverns National Park, and the Mescalero Apache Reservation. There are 109 designated PACs within the Sacramento Ranger District. They are most common in mixed-conifer forest, but have been found in ponderosa pine forest and piñon/juniper woodland (Skaggs and Raitt 1988, U.S. Fish and Wildlife Service 1995).

Reasons for Listing/Threats to Survival

Two primary reasons were cited for listing the owl as threatened in 1993: (1) Historical alteration of its habitat as the result of timber management practices, specifically the use of even-aged silviculture, and the threat of these practices continuing; and (2) the danger of catastrophic wildfire. Forest Service, Region 3, timber harvest practices and catastrophic wildfires, were cited as primary factors leading to listing the owl as a federally-threatened species. Another factor that contributed to declines included the lack of adequate existing regulatory mechanisms. The Recovery Plan also notes that forest management has created habitats favored by great horned owls, increasing the likelihood of predation. Other threats include the potential for increasing malicious and accidental anthropogenic harm (e.g., shooting and vehicle collisions), and for the barred owl to expand its range, resulting in competition or hybridization with the owl.

Recovery Efforts

Resource management programs such as timber harvest, recreation, forest restoration, and management of other species have generally implemented the guidelines identified in the owl's Recovery Plan (U.S. Fish and Wildlife Service 1995). Monitoring and surveying owl populations and habitat have been conducted in relation to project proposals, which have included areas not previously surveyed. Research includes studies designed to increase life-history knowledge of the subspecies, effects of noise disturbance, owl demography, and testing the effects of land management activities on owls. Oversight, review, evaluation, and revision have been used to monitor and initiate the Recovery Plan's effectiveness and also initiation of a Plan revision. A variety of section 7 consultations on Federal actions that may affect owls have been conducted. Those consultations resulted in minimization of adverse effects to the owl and also implemented the Recovery Plan recommendations. Recovery Unit Working Teams have been appointed to work on owl management issues and provide input to the Recovery Plans revision.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area; the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation; and the impact of State and private actions that are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its

habitat in the action area to provide a platform to assess the effects of the action now under consultation. These proposals include timber removal, utility corridor construction and maintenance, fire/ecosystem management projects (including prescribed natural, fire use, and management-ignited fires), livestock grazing, recreation activities, military overflight activities, and wildlife research.

Status of the Species within the Action Area

There are 613 acres in the Pierce owl PAC and an additional 3 acres of restricted habitat are within the action area. This area contains suitable owl roosting, nesting and foraging habitat, consisting of 544 acres of mixed-conifer and 69 acres of meadow. These acres are categorized as approximately 438 acres of nest/roost and 175 acres of foraging habitat. A 100-acre core area was established in July 1998 using observation and vegetation data. There are approximately 2.6 miles of open road, 0.9 miles of motorized trails, 1.2 miles of utility lines, and 0.3 miles of closed roads within the PAC.

The likelihood of owls occurring within the action area is very high. Informal and formal monitoring has confirmed owl presence and one PAC has been designated. The Forest Service conducted protocol surveys of the PAC during 2006 and did not confirm a nest. Nest sites and reproduction have not been confirmed for this PAC.

Factors Affecting Species Environment within Action Area

Past and present Federal, State, private and other human activities that may affect the owl include: livestock grazing, road maintenance, power line maintenance, and fire management activities. The proposed action is located in an area currently managed by the Forest Service within the Basin and Range-East-RU. Various facilities and land uses already exist in the area. The northern segment of this project began prior to consultation being initiated. This BO is not retroactive and does not assess the potential impacts to the owls from those activities. Within the northern portion of the PAC, new power poles have already been installed which are 5 to 10 feet taller than the old poles. Existing power lines have also been moved to the new poles. In the southern portion of the PAC the old poles and transmission lines have not been removed.

The Penasco I Wildland Urban Interface (WUI) project has completed 131 acres of treatment within the PAC. The Rio Penasco II Watershed Restoration Project has pre-commercially treated 197 acres of which 100 acres were within the PAC. New Mexico Highway 130 divides the PAC into two sections and private land is located on two sides of the PAC.

In summary, the action area contains suitable roosting, nesting and foraging habitat, and a designated PAC. The PAC consists of 544 acres of mixed-conifer and 69 acres of meadow. Portions of the action area are within a WUI area and are not designated as critical habitat. There is a high likelihood that owls occur within the action area. Various facilities and land uses already exist in the area.

EFFECTS OF THE ACTION

For the effects of the action, refer to the direct and indirect effects of an action on the species or critical habitat, as well as the effects of interrelated and interdependent activities. Interrelated actions are actions that are part of a larger action and depend on the larger action for their justification. Interdependent actions are actions having no independent utility apart from the proposed action. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Beneficial Effects

Beneficial effects are effects of an action that are wholly positive without any adverse effects to listed species or designated critical habitat. There are no beneficial effects for the owl from the proposed action.

Direct Effects

Habitat altering activities will occur within the Pierce owl PAC and adjacent restricted habitat. The Forest Service has proposed to remove 117 live trees and 5 snags; ninety-nine trees with 27 trees greater than 24 inches dbh would be removed from the restricted habitat. Within the PAC, 14 trees greater than 9 inches dbh would also be removed. Because trees large trees will be removed from restricted and protected habitat, we anticipate adverse effects to the owl. This habitat would not be managed for owls or managed as replacement habitat. These effects are adverse, as described in the Recovery Plan. The loss of this habitat would reduce foraging, nesting, and roosting habitat.

Clearing and tree removal could also damage adjacent trees not requiring removal, and equipment could crush low-growing vegetation as trees are felled, and logs are salvaged. Moreover, vehicles used to remove and install transmission lines will likely crush low-growing vegetation. All of these activities have the potential to cause short-term adverse effects the owl and its habitat.

The Forest Service indicated that a road for maintenance activities is not necessary for the powerline, because minor maintenance will be accomplished from the highway adjacent to the powerline. During emergency repairs that may occur, the powerline corridor and meadows may be used by crews. Nevertheless, this proposed action will likely result in minor fragmentation of a portion of the Pierce PAC and restricted owl habitat. Because of the small number of trees being removed from the PAC, we do not anticipate that harassment of owls will occur. However, the direct effects of habitat alteration within the Pierce owl PAC and contiguous restricted habitat will result in adverse effects to the owl.

Indirect Effects

Although power line installation personnel will use chainsaws and mechanized equipment during tree cutting and removal activities, the Forest Service has indicated that all construction-related activities will be conducted outside of the owl's breeding season. This conservation measure will reduce the indirect effects of noise on the owl. Periodic maintenance of the power line could occur throughout the year. If maintenance activities

are conducted during the owl's breeding season, indirect adverse effects from the use of equipment may occur to owls within the PAC. For this reason, disturbance and associated noise from emergency-related activities have the potential to adversely affect owls. Flushed owls vacate their selected roosts perhaps forcing them to occupy roosts that may not meet thermoregulatory requirements as effectively (Swarthout and Steidl 2001). Flushing also potentially exposes owls to predation from diurnal predators and harassment from other birds such as ravens. Flushing owls will likely experience increased energetic demands and higher stress and/or heat production, all of which are considered adverse.

We do not anticipate that owls will be electrocuted with the high-voltage transmission lines. The conductors will be spaced so that the wingspan of owls will not touch two wires at one time (which is required to cause electrocution).

Initially, the relocation of the power lines within the Pierce owl PAC could cause increased mortality of owls because they would be unfamiliar with the new wire placements (different height). Rubolini et al. (2005) reported that power line may pose severe threats to bird populations. They reported that some groups (e.g. raptors, herons, storks and allies) were highly affected by power line accidents. We conclude that the presence of the transmission line may result in the injury or death of an owl due to a collision caused by the new height and new placement of the transmission line.

Summary

In summary, the direct effects of the proposed action include loss of approximately 5.2 acres of protected and restricted habitat. Clearing and tree removal could damage adjacent trees not targeted for removal, whereas equipment could crush low-growing vegetation as trees are felled and logs are salvaged. The removal of large trees within the PAC and adjacent restricted habitat is inconsistent with the guidelines of the owl's recovery plan. As such, these effects are considered adverse. Construction-related activities will not occur during the owl's breeding season. This will minimize the indirect effects of noise on the owl. However, human disturbance and associated noise during emergency repairs have the potential to adversely affect owls. The only take we anticipate to occur from the project is injury or death of an owl from a collision caused by the new height and new placement of the transmission line.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The action area is within the Sacramento Ranger District where activities occur year-round. These activities reduce the quality and quantity of owl nesting, roosting and foraging habitat, and cause disturbance to breeding owls and contribute as cumulative effects to the proposed action.

Commercial or private development projects on non-Federal land are expected to increase with time. In addition, future actions on non-Federal lands adjacent to the Forest Service lands that are reasonably expected to occur include grazing, road construction, vegetation management (e.g., mowing or herbicide treatments), fuels management, fire suppression activities, power line maintenance, and other associated actions. The major concern in assessing cumulative impacts is the further loss of currently occupied and unoccupied habitat that contributes to a functioning owl population, including those areas necessary to provide connectivity between populations. We believe that the continuing rate of habitat loss has the potential to disrupt the population dynamics of this species.

Expected future actions within or next to Forest Service lands include an additional 15 miles (55 acres) of power line on private land; removal of an undetermined number of trees greater than 24 inches dbh from private land along the power line corridor; pre-commercial and commercial timber harvest on private land for fire abatement. Additionally, five PACs adjacent to private lands where the power line and corridor would be upgraded or relocated could be impacted in the future. Removal of timber from private land could have adverse affects on owls, their habitat, and prey species. Furthermore, livestock grazing and land development may reduce prey base plant cover.

CONCLUSION

After reviewing the current status of the owls, the environmental baseline for the action area, the effects of the proposed Cox Power Line Realignment Project, and the cumulative effects, it is the Service's biological opinion that the action, as proposed is not likely to jeopardize the continued existence of the owl.

This conclusion is based on the following:

1. One owl PAC is within the action area;
2. The local owl population dynamics should remain intact;
3. The majority of potential project impacts will occur outside the owls breeding season, which will further minimize impacts;
4. Activities will take place on less than 6 acres of protected and restricted habitat;
5. No critical habitat is designated within the action area;
6. Human disturbance during tree felling and removal activities would be minimal.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit take of endangered and threatened species without special exemption. Take means to

harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by the Forest Service, so that they become binding conditions of any grant or permit issued to the Forest Service or its contactors or permittees, as appropriate, for the exemption in section 7(o)(2) to apply. The Forest Service has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest Service (1) fails to assume and implement the terms and conditions or (2) fails to require any permittee or contractor to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Forest Service must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE ANTICIPATED

The Service anticipates that the proposed action will result in incidental take of owls. This determination is consistent with our final policy for conducting section 7 consultations on owls and critical habitat dated July 1, 1996. Our policy states that incidental take can only be supported if an activity compromises the integrity of an owl PAC. Actions outside PACs will not be considered incidental take, except in cases when areas that may support owls have not been adequately surveyed. The Service anticipates that the proposed action will result in incidental take of owls in the form of harm from a collision with the new powerline. This determination is based on the knowledge that survey data indicate that owls currently occupy the proposed project area and placement of the new transmission line would be 5 to 10 feet higher than the existing transmission line.

For the purposes of incidental take of owls under the proposed action, incidental take can be anticipated as either direct mortality of an individual owl, or the alteration of habitat that affects the behavior (i.e. breeding, foraging, or sheltering) of birds to such a degree that the birds are considered lost as viable members of the population and thus "taken." They may fail to breed, fail to successfully rear young, raise less fit young, or desert the area or the nest because of disturbance or because habitat no longer meets the owl's needs. Take is anticipated for the owl because:

- a) The realignment and difference in the power line height.

For this proposed project, incidental take of owls may be in the form of harm within the affected PAC. Based on the best available information concerning the owl, habitat needs of this species, the proposed project description, and information furnished by the Forest Service, incidental take is considered likely for the owl as a result of the following action:

- Harm of one owl from a collision with transmission lines in new locations within the PAC.

EFFECT OF THE TAKE

In the accompanying BO, the Service determined that this level of anticipated take is not likely to jeopardize the continued existence of the owl. The Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

REASONABLE AND PRUDENT MEASURES

Pursuant to section 7(b)(4) of the Act, the following reasonable and prudent measures are necessary and appropriate to minimize the amount of incidental take of owls:

1. The Forest Service shall conduct all activities in a manner that will minimize adverse affect to the owl and its habitat.
2. The Forest Service shall seed disturbed areas, where appropriate.
3. The Forest Service shall create owl prey habitat.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures, described above and outline reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following Terms and Conditions are established to implement Reasonable and Prudent Measure 1.

- 1.1 Fell only trees that are hazardous or interfere with transmission lines within the 30-foot wide corridor. The Forest Service shall ensure that only trees marked for felling are cut down.
- 1.2 Staging areas shall be located outside the PAC boundary or along New Mexico Highway 130 to minimize disturbance to owls. The Forest Service shall ensure

- that only designated staging areas are used during tree felling and removal.
- 1.3 All personnel who implement any portion of the proposed action shall be informed of the terms and conditions of this BO and the conservation measures.
 - 1.4 Restrict crews from entering other areas of the PAC during tree felling and removal, to avoid or minimize human disturbance.
 - 1.5 Report to the Service within 1 month of when tree felling and removal, within the PAC, have been completed.

The following Terms and Conditions are established to implement Reasonable and Prudent Measure 2.

- 2.1 Within those areas that have not revegetated naturally, seeding shall be conducted at the appropriate time of year to ensure germination and seedling production. The Forest Service shall monitor reseeding success efforts and treat any infestations of noxious weeds.
- 2.2 Use native plant seed mix to minimize noxious weed invasions.

The following Terms and Conditions are established to implement Reasonable and Prudent Measure 3.

- 3.1 Where possible, use discarded woody debris to create habitat piles for owl prey species.
- 3.2 Woody debris habitat piles shall be placed in an irregular pattern and only in locations that would not increase fire danger within the PAC or adjacent private land.
- 3.3 Allow woody debris habitat pile to decompose naturally.
- 3.4 Woody debris habitat piles shall not be placed within meadows occupied by the Sacramento Mountains checkerspot butterfly (*Euphydryas anicia cloudcrofti*).

Disposition of Dead or Injured Listed Species

Upon finding dead, injured, or sick endangered or threatened species, initial notification must be made to the nearest Service Law Enforcement Office. In New Mexico, contact (505-346-7828) or the New Mexico Ecological Services Field Office (505-346-2525). Written notification must be made within five calendar days and include date, time, and location, photograph, and any other pertinent information. Handling sick or injured animals must ensure proper procedures for effective treatment and care and when handling dead specimen preservation of biological material in the best possible condition must be practiced. If feasible, remains of intact specimens of listed species will be submitted to educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, information noted above will be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens will be made with the institution before carrying out of the action. A qualified biologist should transport injured animals to a qualified veterinarian. Should any listed species survive treatment, the Service should be contacted regarding final disposition of the animal.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The recommendations provided here relate only to the proposed action and do not represent complete fulfillment of the agency's section 7(a)(1) responsibility for this species. We recommend the following conservation recommendations for implementation for the Cox Power Line Realignment Project:

1. The Forest Service should work with private landowners and the Village of Cloudcroft to emphasize the benefits of ecological diversity and the contribution that the owl provides to biological diversity and forest health.
2. The Forest Service should work with local officials to ensure that the potential for recreational activities within PACs is reduced on the lands surrounding the realigned corridor.
3. The Forest Service should strive to complete a programmatic consultation for the Special Use Permit covering Otero Electrical Cooperative operations and maintenance activities.

In order to keep the Service informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in the Cox Power Line Realignment Project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this BO; (3) agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in this biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

The Service appreciates the Forest Service's efforts to identify and minimize effects to listed species from this project. In future communication regarding this project, please refer to consultation #22420-2006-F-0098. Please contact Eric Hein at the letterhead address or at (505) 761-4735, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to be 'AZ' followed by a long horizontal stroke.

Adam Zerrenner
Acting Field Supervisor

cc:

District Ranger, U.S. Department of Agriculture Forest Service, Lincoln National Forest,
Sacramento Ranger District, Cloudcroft, New Mexico
Field Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services Field
Office, Phoenix, Arizona

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SUMMARY
BIOLOGICAL OPINION ON THE EFFECTS TO
THE MEXICAN SPOTTED OWL
FROM THE PROPOSED
COX POWER LINE REALIGNMENT PROJECT

Consultation No. 22420-2006-F-0098

Date of the Biological Opinion: September 22, 2006

Action agency: USDA Lincoln National Forest

Proposed Action: The proposed action is to fell and remove 122 trees, remove an existing electric transmission line, realign portions of the exiting transmission line, and install new poles (southern portion of the Pierce Mexican spotted owl protected activity center [PAC]). Approximately 7.6 acres would be affected, of which 2.1 acres are within the Pierce PAC. Adjacent to the PAC, in 3.1 acres of restricted habitat 61 trees greater than 9 inches dbh are marked for removal. The trees to be felled would include 99 trees outside of the PAC that are greater than 9 inches in diameter at breast height (dbh) and considered commercial sized timber. Within the PAC, there are 14 trees greater than 9 inches dbh marked for removal.

Listed species: Mexican spotted owl (*Strix occidentalis lucida*)

Biological Opinion: The proposed Cox Power Line Realignment Project is not likely to jeopardize the continued existence of the Mexican spotted owl.

Reasonable and Prudent Alternatives: No reasonable and prudent alternatives have been identified for the proposed action.

Incidental Take Statement:

- Harm of one owl from a collision with transmission lines in new locations within the PAC.

Reasonable and Prudent Measures:

1. The Forest Service shall conduct all activities in a manner that will minimize adverse affect to the owl and its habitat.
2. The Forest Service shall seed disturbed areas, where appropriate.
3. The Forest Service shall create owl prey habitat.

Conservation Recommendations

1. The Forest Service should work with private landowners and the Village of Cloudcroft to emphasize the benefits of ecological diversity and the contribution that the owl provides to biological diversity and forest health.
2. The Forest Service should work with local officials to ensure that the potential for recreational activities within PACs is reduced on the lands surrounding the realigned corridor.
3. The Forest Service should strive to complete a programmatic consultation for the Special Use Permit covering Otero Electrical Cooperative operations and maintenance activities.